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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,876	01/24/2002	Rudi Widt	327-090	1717

7590 08/11/2004
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EXAMINER

ROGERS, DAVID A

ART UNIT PAPER NUMBER

2856

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/031,876	Applicant(s) WIDT ET AL.	
	Examiner David A. Rogers	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 4 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Acknowledgment is made regarding the applicant's Request for Continued Examination (RCE). For the purposes of this RCE, the applicant's amended claims filed 01 June 2004 have been entered. Claims 1-7 are now pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,354,142 to Nothhelfer *et al.* in view of United States Patent 5,373,729 to Seigeot and United States Patent 5,182,076 to de Seroux *et al.*

Referring to figure 2, Nothhelfer *et al.* teaches an apparatus to test the tightness of a package (reference item 10). The apparatus comprises an upper frame (reference item 4) and a lower frame (reference item 5). Between the frames is a seal (reference item 17) (not shown in figure 2, but disclosed as being optional. Attached to the frames are upper and lower foils (reference items 2 and 3). Coupled to the interior of the two foils is a conduit (reference item 22) attached to a vacuum source. Nothhelfer *et al.* also expressly teaches:

Seal 17 between the frames 4, 5 is provided for the purpose of sealing off the test chamber to the outside. (column 2, lines 47-49)

and

For reasons of faster evacuation and/or safety, it may be expedient to provide also in the design example according to drawing FIG. 2, a seal 17 for the frame and means for evacuating the outer edge region, as detailed in connection with drawing FIG. 1. (column 2, lines 60-64)

Clearly, Nothhelfer *et al.* is concerned with maintaining the seal on the frames to ensure that the integrity of the test is not lost.

With regard to claim 7, the applicant claims a “circumferential protrusion on one of said first and second frames.” In accordance with the long-standing legal principal that, during examination proceedings, claims are to be given their broadest reasonable interpretation consistent with the specification (see *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000)), a frame with a protrusion is shown in figure 1 of Nothhelfer *et al.* As shown, the upper frame protrudes down to generally surround the sealing element. Likewise, the lower frame also protrudes around the sealing element. Forming these protrusions to be circumferential is a matter of design choice and is not critical to the functionality of the device of Nothhelfer *et al.*

Nothhelfer *et al.* does not teach the use of a plurality of seals between the upper and lower frames where the space between the seals is evacuated independently of the space between the foils.

Seigeot teaches an apparatus to test the tightness of a package (reference item 3). The apparatus comprises a cover (reference item 5) attached to a vacuum pump (reference item 11). The cover further comprises a pair of O-

rings (reference items 8 and 9). The space between the O-rings is evacuated using a second vacuum pump (reference item 18) that operates independently of the first vacuum pump. Seigot further supports this teaching where it is stated:

In a particular embodiment, said means for guaranteeing the gastightness of said cover comprise two concentric sealing rings, and the system of sealing rings of said backing plate comprises two concentric sealing rings, a second vacuum pump being connected to the space between the sealing rings of said cover and to the space between the sealing rings of said plate. (column 2, lines 5-11)

In this manner the cover is effectively sealed against the belt conveyor (reference item 1).

In the case of Nothhelfer *et al.*, providing two or more O-rings between the upper and lower frames would have been an obvious modification, as this would provide redundant sealing means in case one of the O-rings was damaged or misaligned. It has also been held that the duplication of parts does not necessarily distinguish over the prior art. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 and *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8, 11.

Furthermore, even under extreme loads, a single O-ring can leak, as taught by de Seroux *et al.* Finally, as taught by Seigeot, the use of a vacuum helps to ensure that the cover is held tightly and, therefore, does not introduce gas into the test chamber, which would also be desirable in the case of Nothhelfer *et al.*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Nothhelfer *et al.* with the teachings

of Seigot and de Seroux *et al.* in order to obtain a leak testing apparatus comprising two foils attached to upper and lower frame members where the members seal the interior of the foils by means of O-rings, and where the space between the O-rings is evacuated.

Response to Arguments

4. Applicant's arguments filed 01 June 2004 have been fully considered but they are not persuasive.

The applicant argues that Seigot cannot be physically combined with the primary reference of Nothhelfer et al. In their arguments the applicant states that the examiner argues that if the purported edge zone of Seigot were incorporated into the structure of Nothhelfer, the invention would be a bell shaped cover and a conveyor belt. The examiner never made this argument.

The examiner relies upon Seigot to teach that it is known to have a separate, individually evacuated region for maintaining a sealed edge on a leak testing apparatus. As the applicant is aware, references need not be physically combined in order to show obviousness under 35 U.S.C. 103(a). See MPEP § 2145, section III. What is known from Seigot is to create a double-sealed region between two members, and evacuating the space between the seals so as to better hold the members together during testing. This teaching, combined with the teachings of Nothhelfer et al. to use two frames and foils to form a leak testing apparatus, would allow the frames of Nothhelfer et al. to form a tighter, better seal during testing. Applicant is further directed to

"Introduction to Helium Mass Spectrometer Leak Detection" to Varian where, on page 60, the benefits of an independently-evacuated zone using a double-seal arrangement is discussed.

Allowable Subject Matter

5. Claims 3 and 4 are allowed.

Conclusion

6. It is suggested that the applicant rewrite claim 7 as follows:

The method of claim 5, wherein said providing step includes the step of providing a circumferential protrusion on one of said first and second frames, said protrusion positioned so that it contacts with a related foil in order that the said two foils touch each other when said frames are together.

This amendment would incorporate the language of allowed claim 3. This amendment would, therefore, make claim 7 allowable if rewritten in independent manner and including all of the limitations of base claim 5.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Rogers whose telephone number is (703) 305-4451. The examiner can normally be reached on Monday - Friday (0730 - 1600).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dar 
06 August 2004


HEZRON WILLIAMS
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